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EXAMINER	
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ART UNIT	PAPER NUMBER
2151	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/685,991	ANDERSON ET AL.	
	Examiner	Art Unit	
	Khanh Dinh	2151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-54* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-54* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 October 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10/14/03, 2/9/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-54 are presented for examination.

Information Disclosure Statement

2. The information disclosure statements (IDS) submitted on 10/14/2003 and 2/9/2004 were filed after the mailing date of the instant application on 10/14/2003. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

3. Examiner acknowledges the Applicant's petition for color drawings filed on 10/14/2003 and forwarded it to the Petitions Office for review. However, there is no decision has been made.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 54 recites the limitation "the database" in page 101 (line 20 word 9). There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-18, 20-44 and 46-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cossins et al (hereafter Cossins), U.S. Pat. No.6,343,290 in view of Kapoor (hereafter Kapoor) U.S. Pat. No.5,884,038.

As to claim 1, Cossins discloses a method to perform geolocation activities relating to a network information, the method including:

maintaining a database (data management system 304 fig.3) of network information and associated geographic locations (using data management system for

storing network data information including geographic elements and network elements, see fig.3, col.5 line 46 to col.6 line 19).

receiving a query [user 106 fig.3 entering a search criteria in request for a resolution) including a network information], against the database for a geographic location associated with the network address (mapping queries and request to appropriate network element (108 fig.3), see col.6 lines 20-57).

logging information concerning the query received against the database [using geospatial system (306 fig.3) to geocode the geospatial data , network data and geographic data] and modifying geolocation activities (user can configure parameters or components of network elements based on geospatial data) relating to at least the network information based on the logged information (see col.6 line 58 to col.7 line 52).

Cossins does not specifically disclose a query including an Internet address. However, Kapoor in the same network management system discloses a query including an Internet address [Client (101 fig.1) issuing a Domain Name Server (105 fig.1) resolution request for a IP address to a Domain Name Server, see fig.1, col.1 lines 26-50 and col.4 lines 9-54]. It would have been obvious to one of the ordinary skill in the art at the time the invention was made to utilize Kapoor's request into the computer system of Cossins for providing Internet Protocol address with a Domain Name Server because it would have provided a "fair share" in all web servers and thus reduced Domain Name Server traffic in a communications network (see Kapoor's col.4 lines 9-26).

As to claim 2, Cossins further discloses the logging of information concerning the query includes logging the network address if a record identifying the geographic location associated with the network address (if failed condition or degradation of network element associated with a network spatial data is located, displaying warning state or alarm state for events) is not located within the database (see col.11 line 29 to col.12 line 38).

As to claim 3, Cossins further discloses the modifying (configuring parameters) of the geolocation activities includes the geolocation activities relating to at least the network address (user can configure parameters or components of network elements based on geospatial data) (see col.6 line 58 to col.7 line 52). Cossins does not specifically discloses prioritizing the network activities. However, Kapoor in the same network environment discloses prioritizing the network activities (using a DNS for returning IP addresses in such a way that all web servers of an Internet host roughly get their "fair share," see fig.1, col.1 lines 26-50 and col.4 lines 9-54]. It would have been obvious to one of the ordinary skill in the art at the time the invention was made to utilize Kapoor's request into the computer system of Cossins for providing Internet Protocol address with a Domain Name Server because it would have provided a "fair share" in all web servers and thus reduced Domain Name Server traffic in a communications network (see Kapoor's col.4 lines 9-26).

As to claim 4, Cossins further discloses the geolocation activities include collecting

network information pertaining to at least the network address (generating a geospatial data based on network data, geographic data and performance elements and mapping to appropriate network elements, see col.6 line 21 to col.7 line 28).

As to claim 5, Cossins further discloses collecting of the network information pertaining to at least the network address includes collecting the geolocation information utilizing a plurality of data collection agents [data management system (304) and geospatial system (306) of fig.3] (receiving and processing communications based on network data and spatial data from users, see col.6 lines 1-57).

As to claim 6, Cossins further discloses the plurality of data collection agents (304 and 306 of fig.3) are geographically dispersed (using data management system and geospatial system to collect network geographic data, see fig.3, col.6 line 58 to col.7 line 52).

As to claim 7, Cossins further discloses collecting of the network information is performed utilizing a plurality of data collection processes (generating network data, including spatial data, geographic data and network elements in response to user's requests, see col.6 lines 1-57).

As to claim 8, Cossins further discloses collecting of the network information is

performed from a plurality of data sources (databases) [generating network data, including spatial data, geographic data and network elements from various of databases (406 and 408 fig.4) in response to user's requests, see col.6 lines 1-57 and col.8 lines 7-49].

As to claim 9, Cossins further discloses the geolocation activities include estimating the geographic location (using the goecode generator (412 fig.4) to identify and to generate a geocode based on a search criteria including network information) associated with the network address, based on the collected network information (see col.8 line 44 to col.9 line 44).

As to claim 10, Cossins further discloses determining that the database does not indicate a geographic location as being associated with the network information, and wherein the modifying includes the geolocation activities relating to the network address based on the determination that the database does not indicate the geographic location as being associated with the network information (identifying the trouble status of network elements and generating warning levels in response, see fig.5, col.13 line 63 to col.14 line 45). Cossins does not specifically discloses prioritizing the network activities. However, Kapoor in the same network environment discloses prioritizing the network activities (using a DNS for returning IP addresses in such a way that all web servers of an Internet host roughly get their "fair share," see fig.1, col.1 lines 26-50 and col.4 lines 9-54]. It would have been obvious to one of the ordinary skill in the art at the

time the invention was made to utilize Kapoor's request into the computer system of Cossins for providing Internet Protocol address with a Domain Name Server because it would have provided a "fair share" in all web servers and thus reduced Domain Name Server traffic in a communications network (see Kapoor's col.4 lines 9-26).

As to claim 11, Cossins further discloses maintaining a log of network information for which the database does not indicate respective geographic locations as being

associated with the network information [generating network data, including spatial data, geographic data and network elements from various of databases (406 and 408 fig.4) in response to user's requests, see col.6 lines 1-57 and col.8 lines 7-49). Cossins does not specifically disclose prioritizing the activities associated with network addresses. However, Kapoor in the same network environment discloses prioritizing the network activities associated with network addresses (using a DNS for returning IP addresses in such a way that all web servers of an Internet host roughly get their "fair share," see fig.1, col.1 lines 26-50 and col.4 lines 9-54]. It would have been obvious to one of the ordinary skill in the art at the time the invention was made to utilize Kapoor's request into the computer system of Cossins for providing Internet Protocol address with a Domain Name Server because it would have provided a "fair share" in all web servers and thus reduced Domain Name Server traffic in a communications network (see Kapoor's col.4 lines 9-26).

As to claim 12, Cossins further discloses the log is a customer access log that indicates

location misses (identifying a location associated with a trouble ticket in a geographic network), the method including obtaining information concerning location misses from the customer access log (in fig.1, user 106 connects to the GNMS 104 and logs into the GNMS system with a search criteria, such as a base transceiver station (BTS) event, an address, an intersection, a trouble ticket and a map display of an area or a telecommunication network. The map includes an identification of the network elements, such as cell sites, other network data, such as trouble ticket data, and geographic elements, see fig.1, col.5 lines 18-67).

As to claim 13, Cossins does not specifically discloses prioritizing of the geolocation activities is with respect to a plurality of network addresses included in the log. However, Kapoor in the same network environment discloses prioritizing the network activities associated with network addresses included in a log (using a DNS for returning IP addresses in such a way that all web servers of an Internet host roughly get their "fair share," see fig.1, col.1 lines 26-50 and col.4 lines 9-54]. It would have been obvious to one of the ordinary skill in the art at the time the invention was made to utilize Kapoor's request into the computer system of Cossins for providing Internet Protocol address with a Domain Name Server because it would have provided a "fair share" in all web servers and thus reduced Domain Name Server traffic in a communications network (see Kapoor's col.4 lines 9-26).

As to claim 14, Cossins further discloses receiving the query from a requester and

communicating a message to the requester indicating an absence of an association between the network address and the geographic location in the database (identifying a location associated with a trouble ticket in a geographic network) [in fig.1, user 106 connects to the GNMS 104 and logs into the GNMS system with a search criteria, such as a base transceiver station (BTS) event, an address, an intersection, a trouble ticket and a map display of an area or a telecommunication network. The map includes an identification of the network elements, such as cell sites, other network data, such as trouble ticket data, and geographic elements, see fig.1, col.5 lines 18-67].

As to claim 15, Cossins does not specifically disclose the query is received from the external entity responsive to a user accessing a website operated by the external entity, and the network addresses is the network address associated with a machine of the user. However, Kapoor in the same network environment further discloses the query (DNS resolution request) is received from the external entity responsive to a user accessing a website (users accessing a vast number WWW sites operated by multiple Web servers) operated by the external entity, and the network addresses is the network address associated with a machine of the user (users at computers on the Internet address each other with a unique Internet Protocol, see col.1 lines 12-50 and col.4 lines 9-40). It would have been obvious to one of the ordinary skill in the art at the time the invention was made to utilize Kapoor's request into the computer system of Cossins for providing Internet Protocol address with multiple web servers because it would have

provided a "fair share" workload in all web servers and thus handled more requests than a single web server (see Kapoor's col.1 lines 26-50).

As to claim 16, Cossins discloses that the query is received via an Application Program Interface (API) [in figure 4, the database server 404 can be configured with an application interface to facilitate communication between the database server 404 and the data supplier 416, see fig.4, col.8 lines 7-43].

As to claim 17, Cossins discloses the query is received via a customer extranet (the user browser is an IP based browser that communicates with the web server and provides the ability to access and transfer network data and geospatial data via pages across an intranet or internet, see col.9 lines 45-65).

As to claim 18, Cossins disclose the mapping in a geolocation system (104A fig.3)(see col.6 lines 12-57). Cossins does not disclose the mapping includes determining whether the network address is likely to fall within a consolidated domain of network addresses maintained within a database. However, Kapoor in the same network environment discloses determining whether the network address is likely to fall within a consolidated domain of network addresses maintained within a database (Domain Name Server sending back a list of IP addresses addressing to client domains associated with a relative weight, see table 1 in col.4 and col.4 lines 9-67). It would have been obvious to one of the ordinary skill in the art at the time the invention was

made to utilize Kapoor's teaching into the computer system of Cossins for providing Internet Protocol address with a Domain Name Server because it would have provided a "fair share" in all web servers and thus reduced Domain Name Server traffic in a communications network (see Kapoor's col.4 lines 9-26).

As to claim 20, Cossins further discloses the mapping includes identifying a network address block around the network address included within the query (servicing DNS resolution requests from client and returning with a list of client domains, see fig.5, table 2 on col.6, col.5 line 67 to col.6 line 60).

As to claim 21, Cossins discloses the mapping includes running an exact geolocation process (geospatial process) to determine geolocation information for the network address (see col.9 line 45 to col.10 line 52).

As to claim 22, Cossins discloses running an exact geolocation process (geospatial process) to determine geolocation information (performance attribute elements, coverage levels, network data of users, see col.10 line 34 to col.11 line 43). Cossins does not specifically disclose the identified network address block around the network address. However, Kapoor in the same the identified network address block around the network address (servicing DNS resolution requests from client with a geospatial process and returning with a list of appropriate client domains, see fig.5, table 2 on col.6, col.5 line 67 to col.6 line 60). It would have been obvious to one of the ordinary

skill in the art at the time the invention was made to utilize Kapoor's teaching into the computer system of Cossins for providing Internet Protocol address with a Domain Name Server because it would have provided a "fair share" in all web servers and thus reduced Domain Name Server traffic in a communications network (see Kapoor's col.4 lines 9-26).

As to claim 23, Cossins further discloses a group of geolocation processes including a traceroute, a latency calculation (performance attribute elements, coverage levels, network data of users, see col.10 line 34 to col.11 line 43). Cossins does not specially disclose a hostname matching operation and a DNS process. However, Kapoor in the same network environment discloses a hostname matching operation and a DNS process (Domain Name Server sending back a list of IP addresses addressing to client domains associated with a relative weight, see table 1 in col.4 and col.4 lines 9-67). It would have been obvious to one of the ordinary skill in the art at the time the invention was made to utilize Kapoor's teaching into the computer system of Cossins for providing Internet Protocol address with a Domain Name Server because it would have provided a "fair share" in all web servers and thus reduced Domain Name Server traffic in a communications network (see Kapoor's col.4 lines 9-26).

As to claim 24, Cossins further discloses running an inexact geolocation process to determine geolocation information for the network address (generating a geospatial

data based on network data, geographic data and performance elements and mapping to appropriate network elements, see col.6 line 21 to col.7 line 28).

As to claim 25, Cossins further discloses that mapping includes forwarding the network address for manual resolution (identifying network elements and geographic elements within a search range of a geocode and generating a corresponding map, see col.9 lines 3-65).

As to claim 26, Cossins further discloses that the mapping includes a tiered process, including a plurality of sequential automated mapping operations to associate the geographic location with network address (identifying network elements and geographic elements within a search range of a geocode and generating a corresponding map displaying multiple layers of network data, see col.9 lines 3-65).

As to claim 27, Cossins discloses a system to perform geolocation activities relating to a network information, the system including:

a database (data management system 304 fig.3) of network information and associated geographic locations (using data management system for storing network data information including geographic elements and network elements, see fig.3, col.5 line 46 to col.6 line 19).

A server (104A fig.3) to receive a query [user 106 fig.3 entering a search criteria in request for a resolution) including a network information], against the database for a

geographic location associated with the network address (mapping queries and request to appropriate network element (108 fig.3), see col.6 lines 20-57).

log information concerning the query received against the database [using geospatial system (306 fig.3) to geocode the geospatial data , network data and geographic data] and modify geolocation activities (user can configure parameters or components of network elements based on geospatial data) relating to at least the network information based on the logged information (see col.6 line 58 to col.7 line 52).

Cossins does not specifically disclose a query including an Internet address. However, Kapoor in the same network management system discloses a query including an Internet address [Client (101 fig.1) issuing a Domain Name Server (105 fig.1) resolution request for a IP address to a Domain Name Server, see fig.1, col.1 lines 26-50 and col.4 lines 9-54]. It would have been obvious to one of the ordinary skill in the art at the time the invention was made to utilize Kapoor's request into the computer system of Cossins for providing Internet Protocol address with a Domain Name Server because it would have provided a "fair share" in all web servers and thus reduced Domain Name Server traffic in a communications network (see Kapoor's col.4 lines 9-26).

As to claim 28, Cossins further discloses the logging of information concerning the query includes logging the network address if a record identifying the geographic location associated with the network address (if failed condition or degradation of network element associated with a network spatial data is located, displaying warning

state or alarm state for events) is not located within the database (see col.11 line 29 to col.12 line 38).

As to claim 29, Cossins further discloses the modifying (configuring parameters) of the geolocation activities includes the geolocation activities relating to at least the network address (user can configure parameters or components of network elements based on geospatial data) (see col.6 line 58 to col.7 line 52). Cossins does not specifically discloses prioritizing the network activities. However, Kapoor in the same network environment discloses prioritizing the network activities (using a DNS for returning IP addresses in such a way that all web servers of an Internet host roughly get their "fair share," see fig.1, col.1 lines 26-50 and col.4 lines 9-54]. It would have been obvious to one of the ordinary skill in the art at the time the invention was made to utilize Kapoor's request into the computer system of Cossins for providing Internet Protocol address with a Domain Name Server because it would have provided a "fair share" in all web servers and thus reduced Domain Name Server traffic in a communications network (see Kapoor's col.4 lines 9-26).

As to claim 30, Cossins further discloses the geolocation activities include collecting network information pertaining to at least the network address (generating a geospatial data based on network data, geographic data and performance elements and mapping to appropriate network elements, see col.6 line 21 to col.7 line 28).

As to claim 31, Cossins further discloses collecting of the network information pertaining to at least the network address includes collecting the geolocation information utilizing a plurality of data collection agents [data management system (304) and geospatial system (306) of fig.3] (receiving and processing communications based on network data and spatial data from users, see col.6 lines 1-57).

As to claim 32, Cossins further discloses the plurality of data collection agents (304 and 306 of fig.3) are geographically dispersed (using data management system and geospatial system to collect network geographic data, see fig.3, col.6 line 58 to col.7 line 52).

As to claim 33, Cossins further discloses collecting of the network information is performed utilizing a plurality of data collection processes (generating network data, including spatial data, geographic data and network elements in response to user's requests, see col.6 lines 1-57).

As to claim 34, Cossins further discloses collecting of the network information is performed from a plurality of data sources (databases) [generating network data, including spatial data, geographic data and network elements from various of databases (406 and 408 fig.4) in response to user's requests, see col.6 lines 1-57 and col.8 lines 7-49].

As to claim 35, Cossins further discloses the geolocation activities include estimating the geographic location (using the goecode generator (412 fig.4) to identify and to generate a geocode based on a search criteria including network information) associated with the network address, based on the collected network information (see col.8 line 44 to col.9 line 44).

As to claim 36, Cossins further discloses determining that the database does not indicate a geographic location as being associated with the network information, and wherein the modifying includes the geolocation activities relating to the network address based on the determination that the database does not indicate the geographic location as being associated with the network information (identifying the trouble status of network elements and generating warning levels in response, see fig.5, col.13 line 63 to col.14 line 45). Cossins does not specifically discloses prioritizing the network activities. However, Kapoor in the same network environment discloses prioritizing the network activities (using a DNS for returning IP addresses in such a way that all web servers of an Internet host roughly get their "fair share," see fig.1, col.1 lines 26-50 and col.4 lines 9-54]. It would have been obvious to one of the ordinary skill in the art at the time the invention was made to utilize Kapoor's request into the computer system of Cossins for providing Internet Protocol address with a Domain Name Server because it would have provided a "fair share" in all web servers and thus reduced Domain Name Server traffic in a communications network (see Kapoor's col.4 lines 9-26).

As to claim 37, Cossins further discloses maintaining a log of network information for which the database does not indicate respective geographic locations as being associated with the network information [generating network data, including spatial data, geographic data and network elements from various of databases (406 and 408 fig.4) in response to user's requests, see col.6 lines 1-57 and col.8 lines 7-49). Cossins does not specifically disclose prioritizing the activities associated with network addresses. However, Kapoor in the same network environment discloses prioritizing the network activities associated with network addresses (using a DNS for returning IP addresses in such a way that all web servers of an Internet host roughly get their "fair share," see fig.1, col.1 lines 26-50 and col.4 lines 9-54]. It would have been obvious to one of the ordinary skill in the art at the time the invention was made to utilize Kapoor's request into the computer system of Cossins for providing Internet Protocol address with a Domain Name Server because it would have provided a "fair share" in all web servers and thus reduced Domain Name Server traffic in a communications network (see Kapoor's col.4 lines 9-26).

As to claim 38, Cossins further discloses the log is a customer access log that indicates location misses (identifying a location associated with a trouble ticket in a geographic network), the method including obtaining information concerning location misses from the customer access log (in fig.1, user 106 connects to the GNMS 104 and logs into the GNMS system with a search criteria, such as a base transceiver station (BTS) event, an address, an intersection, a trouble ticket and a map display of an area or a

telecommunication network. The map includes an identification of the network elements, such as cell sites, other network data, such as trouble ticket data, and geographic elements, see fig.1, col.5 lines 18-67).

As to claim 39, Cossins does not specifically discloses prioritizing of the geolocation activities is with respect to a plurality of network addresses included in the log. However, Kapoor in the same network environment discloses prioritizing the network activities associated with network addresses included in a log (using a DNS for returning IP addresses in such a way that all web servers of an Internet host roughly get their "fair share," see fig.1, col.1 lines 26-50 and col.4 lines 9-54]. It would have been obvious to one of the ordinary skill in the art at the time the invention was made to utilize Kapoor's request into the computer system of Cossins for providing Internet Protocol address with a Domain Name Server because it would have provided a "fair share" in all web servers and thus reduced Domain Name Server traffic in a communications network (see Kapoor's col.4 lines 9-26).

As to claim 40, Cossins further discloses receiving the query from a requester and communicating a message to the requester indicating an absence of an association between the network address and the geographic location in the database (identifying a location associated with a trouble ticket in a geographic network) [in fig.1, user 106 connects to the GNMS 104 and logs into the GNMS system with a search criteria, such as a base transceiver station (BTS) event, an address, an intersection, a trouble ticket

and a map display of an area or a telecommunication network. The map includes an identification of the network elements, such as cell sites, other network data, such as trouble ticket data, and geographic elements, see fig.1, col.5 lines 18-67].

As to claim 41, Cossins does not specifically disclose the query is received from the external entity responsive to a user accessing a website operated by the external entity, and the network addresses is the network address associated with a machine of the user. However, Kapoor in the same network environment further discloses the query (DNS resolution request) is received from the external entity responsive to a user accessing a website (users accessing a vast number WWW sites operated by multiple Web servers) operated by the external entity, and the network addresses is the network address associated with a machine of the user (users at computers on the Internet address each other with a unique Internet Protocol, see col.1 lines 12-50 and col.4 lines 9-40). It would have been obvious to one of the ordinary skill in the art at the time the invention was made to utilize Kapoor's request into the computer system of Cossins for providing Internet Protocol address with multiple web servers because it would have provided a "fair share" workload in all web servers and thus handled more requests than a single web server (see Kapoor's col.1 lines 26-50).

As to claim 42, Cossins discloses that the query is received via an Application

Program Interface (API) [in figure 4, the database server 404 can be configured with an application interface to facilitate communication between the database server 404 and the data supplier 416, see fig.4, col.8 lines 7-43].

As to claim 43, Cossins discloses the query is received via a customer extranet (the user browser is an IP based browser that communicates with the web server and provides the ability to access and transfer network data and geospatial data via pages across an intranet or internet, see col.9 lines 45-65).

As to claim 44, Cossins disclose the mapping in a geolocation system (104A fig.3)(see col.6 lines 12-57). Cossins does not disclose the mapping includes determining whether the network address is likely to fall within a consolidated domain of network addresses maintained within a database. However, Kapoor in the same network environment discloses determining whether the network address is likely to fall within a consolidated domain of network addresses maintained within a database (Domain Name Server sending back a list of IP addresses addressing to client domains associated with a relative weight, see table 1 in col.4 and col.4 lines 9-67). It would have been obvious to one of the ordinary skill in the art at the time the invention was made to utilize Kapoor's teaching into the computer system of Cossins for providing Internet Protocol address with a Domain Name Server because it would have provided a "fair share" in all web servers and thus reduced Domain Name Server traffic in a communications network (see Kapoor's col.4 lines 9-26).

As to claim 46, Cossins further discloses the mapping includes identifying a network address block around the network address included within the query (servicing DNS resolution requests from client and returning with a list of client domains, see fig.5, table 2 on col.6, col.5 line 67 to col.6 line 60).

As to claim 47, Cossins discloses the mapping includes running an exact geolocation process (geospatial process) to determine geolocation information for the network address (see col.9 line 45 to col.10 line 52).

As to claim 48, Cossins discloses running an exact geolocation process (geospatial process) to determine geolocation information (performance attribute elements, coverage levels, network data of users, see col.10 line 34 to col.11 line 43). Cossins does not specifically disclose the identified network address block around the network address. However, Kapoor in the same the identified network address block around the network address (servicing DNS resolution requests from client with a geospatial process and returning with a list of appropriate client domains, see fig.5, table 2 on col.6, col.5 line 67 to col.6 line 60). It would have been obvious to one of the ordinary skill in the art at the time the invention was made to utilize Kapoor's teaching into the computer system of Cossins for providing Internet Protocol address with a Domain Name Server because it would have provided a "fair share" in all web servers and thus

reduced Domain Name Server traffic in a communications network (see Kapoor's col.4 lines 9-26).

As to claim 49, Cossins further discloses a group of geolocation processes including a traceroute, a latency calculation (performance attribute elements, coverage levels, network data of users, see col.10 line 34 to col.11 line 43). Cossins does not specially disclose a hostname matching operation and a DNS process. However, Kapoor in the same network environment discloses a hostname matching operation and a DNS process (Domain Name Server sending back a list of IP addresses addressing to client domains associated with a relative weight, see table 1 in col.4 and col.4 lines 9-67). It would have been obvious to one of the ordinary skill in the art at the time the invention was made to utilize Kapoor's teaching into the computer system of Cossins for providing Internet Protocol address with a Domain Name Server because it would have provided a "fair share" in all web servers and thus reduced Domain Name Server traffic in a communications network (see Kapoor's col.4 lines 9-26).

As to claim 50, Cossins further discloses running an inexact geolocation process to determine geolocation information for the network address (generating a geospatial data based on network data, geographic data and performance elements and mapping to appropriate network elements, see col.6 line 21 to col.7 line 28).

As to claim 51, Cossins further discloses that mapping includes forwarding the network

address for manual resolution (identifying network elements and geographic elements within a search range of a geocode and generating a corresponding map, see col.9 lines 3-65).

As to claim 52, Cossins further discloses that the mapping includes a tiered process, including a plurality of sequential automated mapping operations to associate the geographic location with network address (identifying network elements and geographic elements within a search range of a geocode and generating a corresponding map displaying multiple layers of network data, see col.9 lines 3-65).

As to claim 53, Cossins discloses a machine-readable medium storing a set of instructions to perform geolocation activities relating to a network information, the method including:

Maintaining a database (data management system 304 fig.3) of network information and associated geographic locations (using data management system for storing network data information including geographic elements and network elements, see fig.3, col.5 line 46 to col.6 line 19).

receiving a query [user 106 fig.3 entering a search criteria in request for a resolution) including a network information], against the database for a geographic location associated with the network address (mapping queries and request to appropriate network element (108 fig.3), see col.6 lines 20-57).

logging information concerning the query received against the database [using geospatial system (306 fig.3) to geocode the geospatial data , network data and geographic data] and modifying geolocation activities (user can configure parameters or components of network elements based on geospatial data) relating to at least the network information based on the logged information (see col.6 line 58 to col.7 line 52).

Cossins does not specifically disclose a query including an Internet address. However, Kapoor in the same network management system discloses a query including an Internet address [Client (101 fig.1) issuing a Domain Name Server (105 fig.1) resolution request for a IP address to a Domain Name Server, see fig.1, col.1 lines 26-50 and col.4 lines 9-54]. It would have been obvious to one of the ordinary skill in the art at the time the invention was made to utilize Kapoor's request into the computer system of Cossins for providing Internet Protocol address with a Domain Name Server because it would have provided a "fair share" in all web servers and thus reduced Domain Name Server traffic in a communications network (see Kapoor's col.4 lines 9-26).

As to claim 54, Cossins discloses a system to perform geolocation activities relating to a network information, the system including:

first means for storing network information and associated geographic locations (using data management system for storing network data information including geographic elements and network elements, see fig.3, col.5 line 46 to col.6 line 19).

second means for receiving a query [user 106 fig.3 entering a search criteria in request for a resolution) including a network information], against the database for a geographic location associated with the network address (mapping queries and request to appropriate network element (108 fig.3), see col.6 lines 20-57).

determining that the database (data management system 304 fig.3) does not indicate a geographic location associated with network information (identifying a location associated with a trouble ticket in a geographic network) [in fig.1, user 106 connects to the GNMS 104 and logs into the GNMS system with a search criteria, such as a base transceiver station event, a trouble ticket and a map display of an area or a telecommunication network. The map includes an identification of the network elements, such as cell sites, other network data, such as trouble ticket data, and geographic elements, see fig.1, col.5 lines 18-67].

log information concerning the query received against the database [using geospatial system (306 fig.3) to geocode the geospatial data , network data and geographic data] and modify geolocation activities (user can configure parameters or components of network elements based on geospatial data) relating to at least the network information based on the logged information (see col.6 line 58 to col.7 line 52).

Cossins does not specifically disclose a query including an Internet address. However, Kapoor in the same network management system discloses a query including an Internet address [Client (101 fig.1) issuing a Domain Name Server (105 fig.1) resolution request for a IP address to a Domain Name Server, see fig.1, col.1 lines 26-50 and col.4 lines 9-54]. It would have been obvious to one of the ordinary skill in the

art at the time the invention was made to utilize Kapoor's request into the computer system of Cossins for providing Internet Protocol address with a Domain Name Server because it would have provided a "fair share" in all web servers and thus reduced Domain Name Server traffic in a communications network (see Kapoor's col.4 lines 9-26).

8. Claims 19 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cossins and Kapoor as applied to claim 1 above, and further in view of Zoken, (hereafter Zoken), U.S. pat. No.5,944,787.

As to claim 19, Cossins and Kapoor's teachings still applied as in claim 1 above. Cossins further discloses a service provider (data supplier including a proprietary computer from a telecommunication service provider, such as a wireless telephone service provider, see col.9 lines 14-44). Neither Cossins nor Kapoor discloses an educational, business and government domain. However, Zoken in the same network environment a group of domains including an educational, business and government domain [top-level domains including "gov" (government institutions), "edu" (educational institutions), "org" (public and private organizations)] (see Zoken's fig.2, col.1 lines 13-46 and col.3 lines 41-67). It would have been obvious to one of the ordinary skill in the art at the time the invention was made to utilize Zokens's various domains into the computer system of Cossins for providing network domains because it would have allowed users to identify one or more geographic locale associated with detected

Internet Service Provider (see Zoken's col.3 lines 41-67) and thus provided more choice of useful domains to appropriate users in a communications network.

As to claim 45, Cossins and Kapoor's teachings still applied as in claim 1 above. Cossins further discloses a service provider (data supplier including a proprietary computer from a telecommunication service provider, such as a wireless telephone service provider, see col.9 lines 14-44). Neither Cossins nor Kapoor discloses an educational, business and government domain. However, Zoken in the same network environment a group of domains including an educational, business and government domain [top-level domains including "gov" (government institutions), "edu" (educational institutions), "org" (public and private organizations)] (see Zoken's fig.2, col.1 lines 13-46 and col.3 lines 41-67). It would have been obvious to one of the ordinary skill in the art at the time the invention was made to utilize Zokens's various domains into the computer system of Cossins for providing network domains because it would have allowed users to identify one or more geographic locale associated with detected Internet Service Provider (see Zoken's col.3 lines 41-67) and thus provided more choice of useful domains to appropriate users in a communications network.

Other prior art cited

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Piccionelli et al, US pat. No.6,154,172: Limiting distribution of information on a communications network based on geographic location.

b. Pande et al, US pat. No.6,389,291: GPS system operating in different modes in a communications network.

c. Akatsu et al, US pat. No.6,523,064: Gateway for collecting network data information.

d. Oran et al., U.S. Pat. No.6,665,611 : Automatically discovers and maintains geographic information for entities and device of a network.

e. Schuster et al., U.S. pat. No.6,674,745: Mapping and IP telephone address with mapping information in a communications network.

f. Garin et al., U.S. pat. No.6,684,158 : Global System Position communications.

Conclusion

10. Claims 1-54 are *rejected.*

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Dinh whose telephone number is (703) 308-8528. The examiner can normally be reached on Monday through Friday from 8:00 A.m. to 5:00 P.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung, can be reached on (703) 308-6687. The fax phone number for this group is (703) 872-9306.

A shortened statutory period for reply is set to expire THREE months from the mailing date of this communication. Failure to response within the period for response will cause the application to become abandoned (35 U. S. C . Sect. 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(A).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305 -9600.

Khanh Dinh
Patent Examiner
Art Unit 2151
8/19/2004